Outdoor Emergency Care

January 2025

Outdoor Emergency Care Enhancement Seminars

Introduction

The National Ski Patrol's Outdoor Emergency Care Enhancement Seminars are continuing education tools designed to enhance existing OEC skills for OEC technicians through an injury or illness-directed practice session selected from a series of pre-designed modules. Each session will be presented in a realistic environment, focusing on the injuries addressed in the selected module. Each module is formatted to include an introduction of topics and objectives, skills demonstrations, practice scenarios, summary and review, and a group discussion. This continuing education opportunity is not meant to replace or supersede existing OEC refresher requirements.

Prerequisites: Current OEC technician

Time Commitment: Approximately $3^{1/2}$ hours per module

Fees: National: None, Division/Region/Local: Varies

Credential: NSP Certificate of Achievement

Instructor of Record: Current OEC Instructor

Required texts: Outdoor Emergency Care, Current Edition

Recommended References: *Outdoor Emergency Care Instructor's Manual* (Current Edition), *Outdoor Emergency Care* Scenarios available in the OEC 6 Instructor Toolkit in the center for learning.

Goals and Objectives

- To improve OEC skills by providing OEC technicians the opportunity to learn, review, practice, question, and challenge themselves with OEC skills in a relaxed, non-evaluative, realistic environment that can be tailored to meet the needs of the individual OEC technician, the NSP patrol, or the ski area.
- To provide OEC instructors with a flexible tool for OEC continuing education opportunities.
- To improve the patroller image within the ski industry, with the public, and with the ski area.

Instructor-to-Student Ratio: A maximum ratio of six students per OEC instructor is recommended. If demonstration scenarios are offered, additional instructors may be needed.

How to Organize an Outdoor Emergency Care Enhancement Seminar

- Register for the seminar using the online course registration process before holding the event.
- Obtain signed waiver forms from all participants.
- Organize qualified instructor staff to accommodate the 1:6 instructor-to-student ratio, help with demonstration scenarios if offered, and act as possible victims for scenarios.
- Assemble the appropriate equipment for the number of participants enrolled. The recommended equipment list for each seminar module is available.
- Review the module's objectives to instruct and challenge the participants. See the selected module outline, patient assessment considerations, and recommended skills and skill guides to be included. For each module, the primary chapter references are listed, but the module may require reference from many other chapters, such as those including material on anatomy and physiology, patient assessment, use of oxygen and airway adjuncts, bleeding control, shock management, mechanism of injury, and rescue techniques.
- Choose appropriate activities for each particular session.
- Review the seminar content to ensure consistency with Outdoor Emergency Care's current edition. Area/patrol-specific protocols covered must also be consistent with OEC's current edition.
- Advise participants to bring the first-aid belt/pack/equipment they usually carry and to dress accordingly for all weather conditions that may occur at the seminar location.
- Evaluate safety risks for the selected module and prepare to manage them to keep the seminar safe for all instructors and participants.
- Limit the costs to the participants to actual direct costs associated with conducting the seminar.
- Encourage students to complete course evaluations before leaving the seminar. Forms can be found online in the Document Library under Resources in the OEC Instructor's Manual.

OEC Enhancement Seminar Instructor-of-Record Notes

- This OEC Enhancement Seminar should simply be the best first-aid clinic the participants have ever attended. How an instructor conducts the teaching in the seminar is up to the individual and his or her personal style of teaching. However, NSP's goal is to ensure

that all members participating in these events nationwide receive consistent information. This is the reason for the recommended module outlines.

- Preface the day with a few motivational thoughts on improving and enhancing the participants' OEC skills. Encourage and motivate the participants to evaluate their own OEC strengths and weaknesses as they progress through the seminar.
- Challenge the participants and strive for a positive, safe training experience for the instructors and students.
- Strive to make the practice fun and meaningful. Plan ways to accommodate a variety of skill levels, providing review through problem-solving situations. Be sure that everyone gets individual feedback specific to their needs and recommendations on improving their skills with future OEC clinics in their region, NSP programs, NSP publications, and online resources.
- Close the course within 14 days of the completion of the seminar.
- It is strongly encouraged that an OEC instructor trainer attends and observes each session.
- A complete set of Skill Guides can be found in the *OEC 6 Instructor Toolkit* in the center for learning.

OEC Enhancement Seminar: Module One
Injuries to the Lower Extremities

You are the Rescuer

(Note: You may substitute any applicable lower-extremity scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

You are dispatched from the ski patrol office at the top of the mountain to the terrain park. The report indicates that a snowboarder has a leg injury after colliding with a rail slide.

Module Objectives

- Locate and name the various bones, major muscle groups, and joints of the lower body, excluding the hip.
- Define and describe the various bone, joint, and soft tissue injuries that one might expect to see on the lower body, excluding the hip.
- Describe the principles of splinting bone and joint injuries, including open fractures.
- Demonstrate splinting and bandaging skills necessary to treat lower body injuries.
- Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC Current Edition References

Primary References: Outdoor Emergency Care, current edition, Chapter 20
Assessment of the Lower Extremity Injury, Chapters 7 and 20
Scene Size-Up, Chapter 7
Primary Assessment, Chapter 7
Assessing Pulse, Motor, and Sensory Function, *Chapter 20*
Caring for Musculoskeletal Injuries, *Chapter 20*
Injuries to the Femur, *Chapter 20*
Traction Splinting, *Chapter 20*
Sager Splint, *Chapter 20*
Kendrick Splint, *Chapter 20*
Injuries to the Knee, *Chapter 20*
Injuries to the Tibia and Fibula, *Chapter 20*
Injuries to the Ankle, *Chapter 20*
Injuries to the Foot, *Chapter 20*
Application of a Quick Splint, *Chapter 20*
Removal of Ski/Snowboard Boots, *Chapter 20*
Review and Practice with Various Ski/Snowboard Binding Systems
Skill Guides that may be applicable (Individual skill guides can be found in the OEC chapter where the skills were introduced. Skill Sheets can be found in the OEC 6 Instructor Toolkit.

Patient Assessment – Responsive Patient, *Chapter 7*
Bleeding Control/Shock Management, *Chapters 10 and 19*
Lower Extremity Splinting, *Chapter 20*
2-person Traction Splinting, *Chapter 20*
Ski Boot Removal, Chapter 20
Lifting Techniques BEAN/Direct ground lift, log roll, Chapters 5 and 21
Use of Oxygen and Airway Adjuncts, Chapter 9
Note: Hip and pelvic injuries are covered in OEC Enhancement Seminar Module 4.

Choose Appropriate Equipment for the Lower Extremity Module

- Traction splints – various types used in local areas
- Oxygen equipment and airway adjuncts
- Quick splints/box splints/splinting and padding material
- Various other splints used in their area (e.g., vacuum splints, airplane splints, SAM splints)
- Ski/snowboard boots for patients for boot removal practice
- Spinal Motion Restriction equipment: backboards, full-body vacuum mattress, collars, webbing or strap systems
- Bandaging materials/tape
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each skill for the scenarios to be practiced or choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Lower Extremity Injuries

- There is always significant blood loss with fractures of the femoral shaft and a high probability of shock.
- Due to the loss of blood and a high potential for shock, femoral shaft fractures may potentially be a life-threatening injury.
- Pediatric injuries near joints usually involve weaker growth plates and should be stabilized and transported promptly (see Chapter 30).
- Angulated and/or rotated fractures of the tibia/fibula frequently must be realigned to their proper anatomic relationship prior to splinting (Chapter 20, Skill Drill).
- Knee ligament sprains continue to be the most common injury in snow sports.
- Extremity injuries that impair circulation or nerve function distal to the injury are urgent situations that require careful assessment, prompt transport, and frequent reassessment of neurovascular functions.
- CMS functions below the injury site should always be monitored before and after splinting and also during transport, if possible.

- Provide immediate transport to any patient if you cannot restore a pulse to a pulseless limb by realignment.
- Suspect a fracture in any older patient or child with even a mild injury.

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on lower extremity injuries for the participants to practice. These can be taken from the OEC 6 Instructor Toolkit scenarios, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Traction splinting of a mid-shaft femur fracture
- Treatment of an open wound or open fracture in a lower extremity
- Treatment for shock
- Optional: One multiple-injury or multiple-victim scenario

Summary and Review

After the practice scenarios are completed, a brief summary and review of the topics and skills covered in the seminar should be presented, along with how these skills can be applied to and enhanced by their every day patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include, but is not limited to:

- Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- Participant's comments and ideas
- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form)
- Ideas for continuing skills improvements, such as future OEC Enhancement Seminars in their area, *OEC* current edition review, and review of online resources.

OEC Enhancement Seminar: Module Two
Injuries to the Upper Extremities

You are the Rescuer

(Note: You may substitute any applicable upper-extremity scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

You are on duty at the top of the race course when you receive a report that a racer has fallen after taking a jump and is complaining of arm and shoulder pain.

Module Objectives

- Locate and name the various bones, major muscle groups, and joints of the upper body.
- Define and describe the various bone, joint, and soft tissue injuries that one might expect to see on the upper body.
- Describe the principles of splinting bone and joint injuries, including open fractures.
- Demonstrate splinting and bandaging skills necessary to treat upper-body injuries.
- Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC Current Edition References

Primary References: *Outdoor Emergency Care*, current edition, *Chapter 20*
Assessment of the Upper-Extremity Injury, *Chapters 7 and 20*
Scene Size-Up, *Chapter 7*
Primary Assessment Responsive Trauma Patients, *Chapter 7*
Assessing Pulse, Motor, and Sensory Function, *Chapter 20*
Caring for Musculoskeletal Injuries, *Chapter 20*
Injuries of the Clavicle and Scapula, *Chapter 20*
Dislocation of the Shoulder, *Chapter 20*
Fractures of the Humerus, *Chapter 20*
Elbow Injuries, *Chapter 20*
Fractures of the Forearm and Wrist, *Chapter 20*
Injuries of the Wrist Joint and Hand, *Chapter 20*
Skills applicable to many upper-extremity injuries
Applying a Sling and Swathe
Forming and Applying a Blanket Roll Splint
Skill Guides that may be applicable in the OEC 6 Instructor Toolkit.
Patient Assessment – Responsive Trauma Patient, *Chapter 7*
Bleeding Control/Shock Management, *Chapters 10 and 19*
Vital Signs Determination, *Chapter 7*
Upper Extremity Splinting, *Chapter 20*

Lifting Techniques, *Chapter 5*
Use of Oxygen and Airway Adjuncts, *Chapter 9*

Recommended Equipment for the Upper Extremity Module

- Quick splints/box splints/splinting and padding material
- Various other splints used in local areas (e.g., vacuum splints, airplane splints, SAM splints)
- Oxygen equipment and airway adjuncts
- Bandaging materials/tape
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each skill for the scenarios to be practiced or choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Upper Extremity Injuries

- Pediatric injuries near joints usually involve weaker growth plates and should be stabilized and transported promptly (see Chapter 30).
- Extremity injuries that impair circulation or nerve function distal to the injury are urgent situations that require careful assessment, prompt transport, and frequent reassessment of neurovascular functions.
- CMS functions below the injury site should always be monitored before and after splinting and during transport if possible.
- In some cases, it may be appropriate to make one attempt at restoring a pulse to a pulseless limb; refer to Chapter 20 for complete details as to when an attempt is appropriate.
- Suspect a fracture in any older patient or child with even a mild injury.

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on upper extremity injuries for the participants to practice. These can be taken from the OEC 6 Instructor Toolkit scenarios, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Treatment for an open wound or open fracture in an upper extremity
- Splinting and immobilization of an upper-extremity injury
- Treatment for shock
- Optional: One multiple-injury or multiple-victim scenario

Summary and Review

After the practice scenarios are completed, a brief summary and review of the topics and skills covered in the seminar should be presented, along with how these skills can be applied to and enhanced by their every day patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include but is not limited to:

- Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- Participant's comments and ideas
- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form)
- Ideas for continuing skills improvement, such as future OEC Enhancement Seminars in their area, *OEC* current edition review, and review of online resources.

Conclusion

Instructors may issue the Certificate of Achievement at this time if it has been preordered or inform participants that it will be mail.

OEC Enhancement Seminar: Module Three
Injuries to the Head, Face, Neck, and Back

You are the Rescuer

(Note: You may substitute any applicable head, face, neck, or back scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

While skiing, a guest emerges from the forest and states that his companion has collided head-on with a tree while skiing the trees off the run.

Module Objectives

- Locate and name the anatomical features of the head, face, neck, and back, including the bones of the spine and back.
- Define and describe the various bone, joint, and soft tissue injuries that one might expect to see on the head, face, neck, and back.
- Discuss the factors that would impact the decision to place a patient on a backboard, including mechanism of injury, level of responsiveness, and motor and neurological factors.
- Describe the principles of splinting injuries to the neck and back.
- Describe the unique needs of patients with injuries to the head and face, especially soft tissue injuries in the areas of the mouth, nose, and eyes.
- Demonstrate splinting and bandaging skills necessary to treat head, face, neck, and back injuries.
- Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC Current Edition References

Primary References: *Outdoor Emergency Care*, current edition, *Chapters 21 and 22*
Assessment of Injuries to the Head, Face, Neck, and Back, *Chapters 7, 21, and 22*
Scene Size-Up, *Chapter 7*
Primary Assessment, Responsive Trauma Patient, *Chapter 7*
Assessing Pulse, Motor, and Sensory Function, *Chapter 20*
Controlling Bleeding from a Neck Injury, *Chapter 22*
Manual In-Line Stabilization, *Chapter 21*
Spinal Motion Restriction, *Chapter 21*
Application of the Scoop Stretcher, Vacuum Mattress, or Long Board, *Chapter 21*
Application of a Cervical Collar, *Chapter 21*
Helmet Removal, *Chapter 21*
Jams and Pretzels, *Chapter 21*
Review of the Signs and Symptoms of Brain Injury, *Chapter 21*
Review of Eye Injuries and Treatments, *Chapter 22*

Review of the AVPU Scale and the Glasgow Coma Scale, *Chapter 7*
Skill Guides that may be applicable (Individual skill guides can be found in the OEC 6 Instructor Toolkit.
Patient Assessment – Responsive Trauma Patient, Chapters 7 and 21
Bleeding Control/Shock Management, Chapters 10 and 19
Vital Signs Determination, Chapter 7
Lifting Techniques/BEAN, Direct Ground Lift, Log Roll, Chapters 5 and 21
Use of Oxygen and Airway Adjuncts, Chapter 9

Recommended Equipment for the Head, Face, Neck, and Back Injury Module

- Spinal Restriction equipment: backboards, vacuum mattresses, scoop stretchers, collars, webbing, or strap systems, including items used specifically for pediatric Restriction.
- Oxygen equipment and airway adjuncts
- Bandaging materials/tape
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each skill for the scenarios to be practiced or choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Injuries to Head, Face, Neck, and Back

- Injuries to the face and throat may impair breathing, so it is important to assess and treat these potentially life-threatening injuries quickly.
- Blunt and/or penetrating neck injuries may cause subcutaneous emphysema, which is air-filled bubbles palpable underneath the skin. This indicates injury to an airway structure that could quickly progress to complete obstruction, so monitoring the airway and transport rapidly is important.
- If a vein in the neck has been lacerated, be alert for the possibility of an air embolism. This may cause cardiac arrest by air being sucked into the heart chambers. Open neck injuries with severe bleeding can usually be controlled with sterile dressings and direct pressure. Be careful not to simultaneously apply direct pressure to both sides of the neck. Do not wrap bandages around the neck. For complete information, refer to Chapter 22, Face, Eye, and Neck Injury.
- Protecting the brain and spinal cord from further damage is vital to the patient's future ability to live a normal life, so lean toward caution and overprotection in assessing and treating these injuries. Even small movements can significantly injure the spinal cord.
- It is essential for these patients to be assessed for motor and sensory functions both before and after Spinal Motion Restriction and observed for their level of responsiveness throughout their care.

- Initially, assess pupil size reaction and level of responsiveness with the AVPU or Glasgow scale every 5 minutes in an unstable patient and every 15 minutes in a stable patient, recording all observations.
- If you suspect a skull fracture, do not apply excessive pressure to an open scalp wound, as you may increase intracranial pressure or push bone fragments into the brain.
- Skull fracture is a possibility if you observe ecchymosis (discoloration) around the eyes
- (raccoon eyes) or behind one ear over the mastoid process (Battle's sign). These signs may typically be delayed.
- Pediatric patients may need additional padding under the shoulders and along their sides for proper Spinal Motion Restriction when placed on an adult-size backboard (Chapter 30).

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on injuries to the head, face, neck, and back for the participants to practice. These can be taken from the OEC 6 Instructor Toolkit scenarios, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Spinal Motion Restriction
- Helmet removal
- Use of oxygen and airway adjuncts
- Treatment for shock
- Seminar student evaluation forms
- Optional: One multiple-injury or multiple-victim scenario

Summary and Review

After the practice scenarios are completed, a brief summary and review of the topics and skills covered in the seminar should be presented, along with how these skills can be applied to and enhanced by their every day patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include but is not limited to

- Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- Participant's comments and ideas

- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form).
- Ideas for continuing skills improvement, such as future OEC Enhancement Seminars in their area, *OEC* current edition review, and review of online resources.

Conclusion

Instructors may issue the Certificate of Achievement at this time if it has been preordered or inform participants that it will be mailed.

OEC Enhancement Seminar: Module Four
Injuries to the Hip and Pelvis

You are the Rescuer

(Note: You may substitute any applicable hip/pelvic scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

You are leaving the aid room when you hear a report on your radio of a child who has fallen from the chairlift in the beginner area not far from you.

Module Objectives

- Locate and name the pelvis and hip bones, including their articulation points with the spine and femur.
- Define and describe the various bone, joint, and soft tissue injuries one might expect to see associated with the hip or pelvis.
- Demonstrate the principles of splinting hip/pelvic injuries, including the preferred method of lifting/moving this patient.
- Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC Current Edition References

Primary References: *Outdoor Emergency Care*, current edition, Chapters 20 and 24 Assessment of Injuries to the Hip and Pelvis, *Chapters 7, 20, and 24*
Scene Size-Up, Chapter 7
Primary Assessment, Responsive Trauma Patients, Chapter 7
Assessing Pulse, Motor, and Sensory Function, Chapter 20
Manual In-Line Stabilization, Chapter 21
Spinal Motion Restriction, Chapter 21
Patient Assessment – Responsive Trauma Patient, Chapter 7
Bleeding Control/Shock Management, Chapters 10 and 19
Vital Signs Determination, Chapter 7
Pelvic Stabilization, Chapter 24
Spinal Motion Restriction, Chapter 21
Lifting Techniques BEAN/Bridge Lift, Chapters 5
Use of Oxygen and Airway Adjuncts, Chapter 9
Skill Guides that may be applicable. A complete of skills can be found in the OEC 6 Instructor Toolkit.

Choose Equipment for the Hip/Pelvic Injury Module

- SMR equipment: backboards, collars, webbing, or strap systems,
- Pelvic stabilization binder or sheet
- Blankets or pillows for immobilization
  Oxygen equipment and airway
  adjuncts Bandaging materials/tape
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each skill for the scenarios to be practiced or choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Injuries to Hip and Pelvis

- Extremity injuries that impair circulation or nerve function distal to the injury are urgent situations that require careful assessment, prompt transport, and frequent reassessment of neurovascular functions.
- Fractures of the pelvis may be accompanied by life-threatening loss of blood into the pelvic space, often with no visible signs, so treatment for shock should begin immediately.
- Pelvis and hip injuries often involve significant mechanisms of injury and require full SMR. Place the patient in the best position for comfort (Chapter 20).
- It is essential that these patients be assessed for circulation, motor, and sensory functions both before and after SMR and observed for their level of responsiveness throughout their care.
- Suspect a fracture in any older patient or child with a mild injury.
- Pediatric injuries near joints usually involve weaker growth plates, and these fractures should be stabilized and transported promptly.
- Pediatric patients may need additional padding under the shoulders and along their sides for proper SMR when placed on an adult-size backboard (Chapter 30).

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on injuries to the hip and pelvis for the participants to practice. These can be found in the OEC 6 Instructor Toolkit scenarios. Instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment

- Pelvic stabilization
- Complete Spinal Motion Restriction
- Use of oxygen and airway adjuncts
- Treatment for shock
- Optional: One multiple-injury or multiple-victim scenario

Summary and Review

After the practice scenarios are completed, a brief summary and review of the topics and skills covered in the seminar should be presented, along with how these skills can be applied to and enhanced by their every day patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include but is not limited to:

- Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- Participant's comments and ideas
- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form)
- Ideas for continuing skills improvement, such as future OEC Enhancement Seminars in their area, OEC current edition review, and review of online resources.

Conclusion

Instructors may issue the Certificate of Achievement at this time if it has been preordered or inform participants that it will be mailed.

OEC Enhancement Seminar: Module Five
Injuries to the Chest, Abdomen, and Genitalia

You are the Rescuer

(Note: You may substitute any applicable chest or abdomen/genitalia scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

You are working in the aid room when a guest is escorted into the room by his friends. He has an impaled tree branch protruding from his abdomen. The friends state he impaled himself on a tree while snowboarding near the bottom of the mountain.

Module Objectives

- Locate and name the various bones, muscle groups, and organs associated with the chest, abdomen (four quadrants), and genitalia.
- Define and describe the various bone and soft tissue injuries one might expect to see associated with the chest, abdomen, or genitalia.
- Define and describe signs and symptoms one might expect to encounter with closed soft tissue injuries to the abdomen.
- Describe and demonstrate the principles of emergency care for injuries to these areas, including bleeding control and splinting.
- Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC Current Edition References:

Primary References: Outdoor Emergency Care, current edition, Chapters 23 and 24 Assessment of Injuries to the Chest, Abdomen, and Genitalia, Chapters 23 and 24 Scene Size-Up, Chapter 7
Primary Assessment – Responsive Trauma Patients, Chapter 7
Review of Open Chest Injuries, Chapter 23
Pneumothorax, Chapter 23 Sucking Chest Wound, Chapter 23 Tension Pneumothorax, Chapter 23
Hemothorax, Chapter 23
Hemopneumothorax, Chapter 23
Flail Chest, Chapter 23
Sealing a Sucking Chest Wound, Chapter 23 Stabilizing an Impaled Object, Chapter 19 Review of DCAP-BTLS, Chapter 7
Review of the AVPU Scale and the Glasgow Coma Scale, Chapter 7
Patient Assessment – Responsive Trauma Patient,
Chapter 7 Bleeding Control/Shock Management, Chapters 10 and 19
Vital Signs Determination, Chapter 7
Lifting Techniques, BEAN Lift, Direct Ground Lift, Log Roll, Chapters 5 and 21

Use of Oxygen and Airway Adjuncts, *Chapter 9*
Skill Guides that may be applicable are found in the individual skill guides in the OEC 6 Instructor Toolkit.

Recommended Equipment for the Chest, Abdomen, and Genitalia Injury Module

- Oxygen equipment and airway adjuncts
- Bandaging materials/tape, occlusive dressing
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations:

Instructors may demonstrate each skill for the scenarios to be practiced or choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Injuries to Chest, Abdomen, and Genitalia

- Both open and closed chest injuries may be life-threatening situations that may not be readily apparent during assessment.
- Blunt abdominal trauma may cause rapid hemorrhagic shock from associated internal injuries—even with minimal physical signs or symptoms that present during the initial assessment. If a penetrating object is still in place, do not remove the object. You should apply a stabilizing bandage to control external bleeding, minimize movement, and transport the patient immediately.
- Injuries and wounds to the external male and female genitalia are very painful soft tissue injuries and may bleed heavily. They are usually not life-threatening, but the patients should be transported to the hospital for careful evaluation, especially injuries to the male genitalia

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on injuries to the chest, abdomen, and genitalia for the participants to practice. These can be taken from OEC 6 Instructor Toolkit scenarios, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Use of oxygen and airway adjuncts
- Immobilization of a penetrating object in the abdomen
- Bleeding control methods for chest, abdomen, and genitalia injuries
- Treatment for shock
- Optional: One multiple-injury or multiple-victim scenario

Summary and Review

After the practice scenarios are completed, a brief summary and review of the topics and skills covered in the seminar should be presented, along with how these skills can be applied to and enhanced by their every day patrolling experiences. This could be a question-prompted interactive session with the participants.

- Participant's comments and ideas
- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form)
- Ideas for continuing skills improvement, such as future OEC Enhancement Seminars in their area, *OEC* current edition review, and review of online resources.

Conclusion:

Instructors may issue the Certificate of Achievement at this time if it has been preordered or inform participants that it will be mailed.

OEC Enhancement Seminar: Module Six
The Unresponsive or Altered Guest

You are the Rescuer

While sweeping the mountain at the end of the day with your partner, you notice a lifeless figure lying in the snow just below you on the run. The person does not have skis or a snowboard on but seems to be dressed for cold weather.

(Note: You may substitute any applicable unresponsive/altered guest scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

Module Objectives

- Review the levels of responsiveness on the AVPU scale and/or the Glasgow Coma Scale. Define and describe unresponsiveness, including causes both traumatic and medical.
- Discuss and demonstrate the differences in assessing an unresponsive patient compared to a responsive patient.
- Define and describe ways in which a guest might be considered "altered," including levels of responsiveness less than alert, alcohol and/or drug influences, and medical conditions that may contribute to "altered" behaviors.
- Discuss ways in which a patroller may modify his or her own behavior when dealing with the various causes of altered behavior in a guest.
- Demonstrate splinting, bandaging, and other care skills necessary to treat the unresponsive or altered guest.
- Describe transportation options for patients with such injuries or behaviors, including positioning in a toboggan.

OEC Current Edition References

Outdoor Emergency Care, current edition, Chapters 7, 11, 12, and 21
Scene Size-Up, Chapter 7
Primary Patient Assessment, Chapter 7
- Assess the Level of Responsiveness
- Assess the ABCD's
- AVPU Scale

Secondary Patient Assessment, Chapter 7
- Assessing Vital signs
- DCAP-BTLS
- Neurological assessment

Causes of Altered Mental Status, Chapter 11
Patient Assessment for Substance Abuse and Poisoning, Chapter 12
Management of Spine, Brain, and Nervous System Injuries, Chapter 21
A complete set of Skill Guides can be found in the OEC 6 Instructor Toolkit.

Skill Guides that may be applicable:
Lifting Techniques: BEAN/ Bridge Lift, Direct Lift, Log Roll, Chapter 5
Patient Assessment, Chapter 7
Vital Signs Assessments, Chapter 7
Use of Oxygen and Airway Adjuncts, Chapter 9
Managing Shock, Chapter 10
Controlling Bleeding, Chapter 19
Performing Neutral Head Alignment, Chapter 21
Sizing and applying a cervical collar, Chapter 21
Securing patient onto a long backboard, Chapter 21

Choose Equipment for the Unresponsive or Altered Guest Module

- Spinal Restriction equipment: backboards, collars, webbing, or strap systems, vacuum splints
- Oxygen equipment and airway adjuncts
- Bandaging materials/tape
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each skill for the scenarios to be practiced or choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Caring for Unresponsive or Altered Guests

- A guest may be unresponsive due to something as simple as a fainting spell or due to something as urgent as a major medical or traumatic emergency.
- A thorough scene size-up, paying close attention to possible mechanisms of injury, can sometimes give you clues as to why the guest is unresponsive or has an altered mental status.
- Unresponsive guests or guests with an altered mental status are definite candidates for immediate transport.
- If an unresponsive guest becomes responsive during your patient assessment, you should begin the assessment again to obtain the most reliable information.
- The most common causes of altered responsiveness are hypoglycemia, intoxication, drug overdose, and poisoning.
- Prompt transport and frequent monitoring of vital signs are imperative with unresponsive or altered guests.
- Initially, assess pupil size, reaction, and level of responsiveness with the AVPU or Glasgow Coma scale every 5 minutes in an unstable patient and every 15 minutes in a stable patient, recording all observations.

- In some cases, a SAMPLE history may be obtained from friends, family, or bystanders if the patient/guest cannot communicate with you.
- Protecting the brain and spinal cord from damage is vital to the patient's future ability to live a normal life, so err toward caution and overprotection in assessing and treating these injuries. Even small movements can significantly injure the spinal cord.
- It is essential that these patients be assessed for circulation, motor, and sensory functions both before and after SMR and observed for their level of responsiveness throughout their care.

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios dealing with the unresponsive or altered guest for the participants to practice. These can be found in the OEC 6 Instructor Toolkit, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Complete Spinal Motion Restriction of an unresponsive guest
- Use of oxygen and airway adjuncts
- Treatment for shock
- Optional: One multiple-injury or multiple-victim scenario

Summary and Review

After the practice scenarios are completed, a brief summary and review of the topics and skills covered in the seminar should be presented, along with how these skills can be applied to and enhanced by their every day patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

- The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include but is not limited to
- Encouragement of participants to evaluate their own OEC skills based on the practice session
- Participant's comments and ideas
- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form)
- Ideas for continuing skills improvement, such as future OEC Enhancement Seminars in their area, *OEC* current edition review, and review of online resources.

Conclusion:

Instructors may issue the Certificate of Achievement at this time if it has been preordered or inform participants that it will be mailed.

OEC Enhancement Seminar: Module Seven
Adaptive Athlete

You are the Rescuer

You are requested to respond to an incident involving an adaptive skier who is an amputee who has no left lower extremity. Another skier cut off this adaptive skier, dumped the sit-ski, and slid into a tree with the right lower extremity.

(Note: You may substitute any applicable adaptive athlete guest scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

Module Objectives

- Describe and demonstrate how to assess an adaptive athlete.
- Describe and demonstrate how to care for an adaptive athlete who is injured or ill.
- Describe some special considerations that should be followed for extrication, transport, and evacuation of disabled athletes.
- Describe various special equipment that may be used by adaptive athletes to participate in outdoor recreation.
- Describe and demonstrate how to effectively communicate with a person who has an intellectual disability or with a person who is deaf.
- Describe and demonstrate how to manage an above-the-knee amputee with a femur fracture of the same leg.

OEC Current Edition References

Adaptive Athletes, Chapter 32
Autonomic Dysreflexia
Patient Assessment, Chapter 7
Skills Guides that may be applicable:
Patient Assessment, Chapter 7
Assessing Pulse, Respiratory Rate and BP, Chapter 7
Managing Shock, Chapter 10
Applying a Quick Splint, Chapter 20

Choose Equipment for the Adaptive Athlete Module

- BP cuff and stethoscope
- Quick Splint
- Oxygen equipment and airway adjuncts

- Backboard/ Scoop stretcher
- Sit ski, if available
- Other adaptive equipment
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms
- Skill Guides that may be applicable (Individual skill guides can be found in the OEC manual in the chapter where the skill was introduced. A complete set of Skill Guides can be found in the OEC 6 Instructor Toolkit.

Skills and Scenario Demonstrations

Instructors may demonstrate each skill for the scenarios to be practiced or choose to demonstrate one or more full start-to-finish simulated scenarios.

***When applicable, the involvement of individuals/groups that work with adaptive athletes to discuss and demonstrate equipment management techniques and how best to assist the adaptive athletes in their programs.**

Points to Ponder Regarding Caring for Adaptive Athletes

- All adaptive athletes with disabilities are people and are not solely defined by their impairment.
- Altered mental status results from a new injury or illness until proven otherwise.
- Do not speak to mentally disabled adults as if they are children but do use simple words. Be calm and reassuring and explain actions in advance.
- Ask adaptive athletes how you can assist them. Also, ask the athlete's skiing guide, chaperone, or caregiver for information and assistance.
- Collect an adaptive athlete's equipment and transport it with the athlete. Treat the items with care, as most of this equipment is expensive, is very personal, and will take a long time to replace if lost or damaged.
- Paraplegics and athletes with neuromuscular disorders are at an increased risk for hypothermia and frostbite.
- Patients with spina bifida are commonly allergic to latex. Always use latex-free gloves when treating these patients to avoid an anaphylactic reaction.
- OEC technicians should convey respect for adaptive athletes and their disability by using the basics of good communication.

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios for the participants to practice with adaptive athletes. These can be taken from the OEC 6 Instructor

Toolkit. *OEC* textbook or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Complete splinting for femur fracture on the same side as an amputation.
- Use of oxygen and airway adjuncts
- Treatment for shock
- Optional: One multiple-injury or multiple-victim scenario

Summary and Review

After the practice scenarios are completed, a brief summary and review of the topics and skills covered in the seminar should be presented, along with how these skills can be applied to and enhanced by their every day patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include but is not limited to:

- Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- Participants comments and ideas
- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form)
- Ideas for continuing skills improvement, such as future OEC Enhancement Seminars in their area, *OEC* current edition review, and review of online resources.

Conclusion:

Instructors may issue the Certificate of Achievement at this time if it has been preordered or inform participants that it will be mailed.